



Figure 1



Name	Chemical Formula
Styrylpyridinium cyanine dye (SPCD)	 <chem>CN(C)c1ccc(C=Cc2cc[n+](C)c2)cc1.[CH3-]S(=O)(=O)(O)O</chem>
4'-dimethylamino-N-methyl-4-stilbazolium tosylate (DAST)	 <chem>CN(C)c1ccc(C=Cc2cc[n+](C)c2-c3ccc(C)cc3S(=O)(=O)[O-])cc1.[CH3-]S(=O)(=O)(O)O</chem>
4'-diethylamino-N-methyl-4-stilbazolium tosylate (DEST)	 <chem>CCN(CC)c1ccc(C=Cc2cc[n+](C)c2-c3ccc(C)cc3S(=O)(=O)[O-])cc1.[CH3-]S(=O)(=O)(O)O</chem>
4'-dimethylamino-N-methyl-4-stilbazolium iodide (DASPI)	 <chem>CN(C)c1ccc(C=Cc2cc[n+](C)c2)cc1.[I-]</chem>

Figure 11



FIGURE 12

Abbreviated Name	λ_{peak} (nm)	Linewidth (nm)	Conversion Efficiency (%)
SPCD	620	10	40
DAST	610	9	35
DEST	617	14	20
DASPI	616	10	40



FIGURE 13

Material	Solvent	λ_{pump} (nm)	λ_{PL} (nm)	PL % Efficiency	Energy Threshold ($\mu\text{J/pulse}$)	Final Linewidth (nm)	Conversion Efficiency (%)
DTTC ^a (ref. 1)	Methanol	694	798	>50	-	13-18	3
Coumarin 47 ^b (ref. 2)	Ethanol	355	451	>70	200	-	2.8
Coumarin (ref. 2)	Ethanol	355	439	72	200	-	2.3
TOP-PPV ^b (ref. 2)	Hexane	355	449	80-90	100	7	6.8
MEH-PPV ^b (ref. 3)	Xylene/ CHCl_3	532	600	large	180	7	0.5
DCM ^a (10^{-3} mol/l)	Methanol	532	641	60-70	8	10	25
R6G ^a (10^{-3} mol/l)	Methanol	532	570	~70	1.5	10	30
SPCD ^a (0.1 mol/l)	Methanol	532	620	0.3	<1	10	40

^aMeasured without any external mirrors.

^bMeasured with an external resonator cavity.